

IN THE CLAIMS

For the convenience of the Examiner, all pending claims are set forth below, whether or not an amendment is made.

1. (Currently Amended) A method for data processing comprising:
receiving a data request at a data center, the request received from a client computer requesting data;
determining a state associated with the request to send data to the client computer;
assigning a priority to the request according to ~~a state~~ the state associated with the request and according to priority criteria associated with the state;
automatically adjusting the priority criteria;
dynamically updating the priority of the request to send data to the client computer in response to a change of the state the adjusted priority criteria;
queuing the request as a function of the priority associated with the request; and
retrieving the requested data from an origin server.
2. (Original) The method for data processing according to Claim 1, wherein the data center comprises a cache server, a flow control server and a web server.
3. (Original) The method for data processing according to Claim 1 further comprising:
determining a load associated with the origin server;
controlling at a flow control server retrieval of data from the origin server by a cache server;
granting permission from the flow control server to the cache server to retrieve data when the load associated with the origin server is below a threshold; and
denying permission from the flow control server to the cache server to retrieve data when the load associated with the origin server is above the threshold.
4. (Original) The method for data processing according to Claim 3, wherein the threshold is determined as a function of the load of the origin server.

5. (Canceled)

6. (Currently Amended) The method for data processing according to Claim 1 further comprising communicating alternate content to a remote computer associated with the request, the alternate content comprising a status page, the status page comprising an automatic re-submission time for re-issuing the request.

7. (Currently Amended) The method for data processing according to Claim 6, wherein the alternate content comprises ~~a status~~ the status page and wherein the status page is communicated when the load at the origin server exceeds a predetermined threshold.

8. (Original) The method for data processing according to Claim 6, wherein communicating the alternate content comprises:

associating a queue delay time with the request;
determining whether the queue delay time exceeds a threshold;
generating the alternate content as a function of predetermined criteria associated with the origin server when the queue delay time exceeds the threshold; and
returning the alternate content to the remote computer.

9. (Currently Amended) The method for data processing according to Claim 8, wherein the data ~~requested~~ request is generated at ~~a-client~~ the client computer remote from the data center and wherein generating the alternate content comprises selecting the alternate content as a function of the bandwidth available to the client computer.

10. (Original) The method for data processing according to Claim 9, wherein generating the alternate content further comprises determining the amount of bandwidth available to the client computer, wherein the amount of bandwidth comprises one of high-bandwidth, medium-bandwidth and low-bandwidth.

11. (Original) The method for data processing according to Claim 8, wherein generating the alternate content further comprises generating the alternate content based on the queue delay time and the predetermined criteria.

12. (Original) The method for data processing according to Claim 8, wherein the predetermined criteria comprises information associated with the request.

13. (Original) The method for data processing according to Claim 8, wherein the predetermined criteria comprises external information associated with a user associated with the request.

14. (Original) The method for data processing according to Claim 13, wherein the external information comprises historical shopping information associated with the user associated with the request.

15. (Currently Amended) The method for data processing according to Claim 6, wherein the alternate content comprises ~~a-status~~ the status page and further including resubmitting the data request to the data center by a browser to update the status page.

16. (Original) The method for data processing according to Claim 15, wherein resubmitting the data request is performed automatically by the browser.

17. (Original) The method for data processing according to Claim 1, wherein assigning the priority to the request comprises determining whether the request is prioritizable, and wherein the priority is a first priority when the request is non-prioritizable and wherein the priority is a second priority when the request is prioritizable.

18. (Original) The method for data processing according to Claim 17, wherein the first priority is a default priority and wherein the second priority is determined as a function of the data requested by the data request.

19. (Original) The method for data processing according to Claim 1 further comprising determining the load on an origin server by comparing a load metric associated with the origin server to a predetermined threshold.

20. (Original) The method for data processing according to Claim 19, wherein the load metric comprises the number of requests being handled by the origin server.

21. (Original) The method for data processing according to Claim 19, wherein the load metric comprises the number of network connections being supported by the origin server.

22. (Original) The method for data processing according to Claim 19, wherein the load metric comprises the delay associated with retrieving a predetermined web page from the origin server.

23. (Original) The method for data processing according to Claim 1, wherein the request is a first request and wherein queuing the request comprises:

storing the first request in a queue associated with the data center, the queue having therein a plurality of second requests distinct from the first request, each of the second requests having a respective priority associated therewith;

sorting the queue as a function of the respective priority associated with the first request and each of the second requests; and

wherein retrieving the requested data comprises:

processing the highest priority request in the queue by the origin server.

24. (Currently Amended) The method for data processing according to Claim 1, wherein the data center comprises a plurality of data centers and wherein receiving the request comprises:

determining a network distance between a ~~client~~ the client computer and at least one of the data centers;

determining the closest data center to the client computer;

resolving a destination address associated with the request to the closest data center;

and

routing the request to the closest data center.

25. (Currently Amended) A system for dynamic flow control comprising:

a cache server operable to receive a request for content and retrieve content from an origin server in response thereto, the request received from a client computer requesting the content; and

a flow control server having an associated queue and coupled to the cache server, the flow control server operable to:

determining a state associated with the request to send data to the client computer;

assign a priority to the request according to ~~a state~~ the state associated with the request and according to priority criteria associated with the state;

automatically adjusting the priority criteria;

dynamically update the priority of the request to send data to the client computer in response to ~~a change of the state~~ the adjusted priority criteria;

store the prioritized request in the queue as a function of the priority associated with the request; and

regulate the retrieval of content from the origin server by the cache server.

26. (Original) The system for dynamic flow control according to Claim 25, wherein the cache server is further operable to request permission from the flow control server to retrieve content from the origin server.

27. (Original) The system for dynamic flow control according to Claim 25, wherein the flow control server is further operable to associate a priority with the request based on the content requested by the request and determine a processing load associated with the origin server.

28. (Original) The system for dynamic flow control according to Claim 25, wherein the flow control server is further operable to associated a priority with the request based on external information associated with the request.

29. (Original) The system for dynamic flow control according to Claim 28, wherein the external information comprises historical information associated with a user associated with the request.

30. (Currently Amended) A method for dynamic flow control comprising:
receiving a data request at a flow control server, the request received from a client computer requesting data;
determining a state associated with the request to send data to the client computer;
associating a priority with the data request according to ~~a state~~ the state associated with the request and according to priority criteria associated with the state;
automatically adjusting the priority criteria;
dynamically updating the priority of the request to send data to the client computer in response to a change of the state the adjusted priority criteria;
storing the data request in a queue as a function of the priority associated with the data request; and
retrieving data requested by the data request from a protected resource.

31. (Original) The method for dynamic flow control according to Claim 30 further comprising determining a load at the protected resource, and wherein associating a priority with the data request comprises associating the priority with the data request when the load at the protected resource exceeds a predetermined threshold and wherein queuing the data request comprises queuing the data request when the load at the protected resource exceeds the predetermined threshold.

32. (Original) The method for dynamic flow control according to Claim 31 further comprising indicating status information to be returned to a remote computer associated with the data request.

33. (Original) The method for dynamic flow control according to Claim 31 further comprising indicating alternate content to be returned to a remote computer associated with the data request.

34. (Original) The method for dynamic flow control according to Claim 33 further comprising determining the alternate content as a function of the bandwidth associated with the remote computer.

35. (Original) The method for dynamic flow control according to Claim 32, wherein the status information comprises a status web page and wherein indicating status information comprises selecting the status page based on priority criteria associated with the protected resource.

36. (Original) The method for dynamic flow control according to Claim 35 further comprising resubmitting the data request after a predetermined time interval to the flow control server.

37. (Original) The method for dynamic flow control according to Claim 36, wherein resubmitting the data request is performed automatically.

38. (Original) The method for dynamic flow control according to Claim 35 further comprising delaying communication of the status page indication for a predetermined time interval based on the priority criteria.

39. (Original) The method for dynamic flow control according to Claim 38, wherein delaying communication of the status page comprises delaying communication of the status page indication based on an expected delay associated with the protected resource.

40. (Original) The method for dynamic flow control according to Claim 31, wherein receiving the data request comprises receiving the data request from a flow controlled device.

41. (Original) The method for dynamic flow control according to Claim 31, wherein retrieving the data requested by the data request comprises:

removing at least one prioritized data request from the queue when the load at the protected resource is below the predetermined threshold;

communicating the prioritized data requests to the protected resource;

retrieving the requested data from the protected resource; and

communicating the requested data to a flow controlled device associated with the data request.

42. (Original) The method for dynamic flow control according to Claim 41, wherein removing at least one prioritized data request comprises removing the highest priority data request.

43. (Original) The method for dynamic flow control according to Claim 41, wherein associating the priority with the request comprises determining whether the request is prioritizable, and wherein the priority is a first priority when the request is non-prioritizable and wherein the priority is a second priority when the request is prioritizable.

44. (Original) The method for data processing according to Claim 43, wherein the first priority is a default priority and wherein the second priority is determined as a function of the request.

45. (Withdrawn) A method for content filtering comprising:
receiving a data request at a flow control server from a flow controlled device, the data request having associated requested data;
evaluating the requested data against criteria;
discarding the data request when the requested data is forbidden by the criteria;
determining alternate data based on the criteria and the requested data when the requested data is forbidden by the criteria; and
indicating the alternate data to the flow controlled device when the requested data is forbidden.

46. (Withdrawn) The method of content filtering according to Claim 45, wherein the criteria comprises the geographic origin of the data request.

47. (Withdrawn) The method of content filtering according to Claim 45, wherein the criteria comprises the content of the requested data.

48. (Withdrawn) The method of content filtering according to Claim 45, wherein the criteria comprises the geographic origin of the data request and the content of the requested data.

49. (Withdrawn) The method of content filtering according to Claim 45, wherein the alternate data comprises a content forbidden web page.

50. (Withdrawn) The method of content filtering according to Claim 45, wherein the alternate data comprises an allowable web page.

51. (Withdrawn) The method of content filtering according to Claim 45, wherein indicating the alternate data comprises returning the alternate data to the flow controlled device.

52. (Withdrawn) The method of content filtering according to Claim 45, wherein indicating the alternate data comprises returning a location of the alternate data to the flow controlled device.